PATENT CLAIMS

1. A method for extraction of copper from an aqueous solution containing a large amount of sulphates in liquid-liquid extraction, **characterized in** that the viscosity of an extraction solution is adjusted within the range of 3 –11 cP and that the volumetric ratio of the extraction solution and an aqueous solution in an extraction mixture to between 0.7 – 1.0, whereby the aqueous solution is dispersed into drops in the extraction solution.

2. A method according to claim 1, **characterized in** that the viscosity of the extraction solution is raised by raising the content of an extractant.

3. A method according to claim 2, **characterized in** that the viscosity of the extraction solution is raised by regulating the extractant content of the extraction solution in the range of 15 – 70 vol. %.

4. A method according to claim 1, **characterized in** that the ratio (O/A) between the organic solution and the aqueous solution coming to the extraction stage from outside is regulated in the range of 0.15 – 1.

5. A method according to claim 3, **characterized in** that in treating an aqueous solutions with a copper content of maximum 2 g/l, the viscosity of the extraction solution is raised by adjusting the content of the extractant in the extraction solution to the range of 15 – 25 vol.%.

6. A method according to claim 5, **characterized in** that the external pumping ratio of the extraction solution and the aqueous solution is adjusted to the range of 0.2 – 0.5 and the corresponding external pumping ratio between a stripped copper electrolyte and the aqueous solution of the extraction is adjusted to the range of 0.08 – 0.02.

7. A method according to claim 3, **characterized in** that in treating an aqueous solution with a copper content of 2 – 4 g/l, the viscosity of the extraction solution is raised by adjusting the content of the extractant in the extraction solution to the range of 15 – 30 vol.%.

8. A method according to claim 7, **characterized in** that the external pumping ratio of the extraction solution and the aqueous solution is adjusted to the range of 0.3 – 0.7 and the corresponding external pumping ratio between the stripped copper electrolyte and the aqueous solution of the extraction is adjusted to the range of 0.15 – 0.25.

9. A method according to claim 3, **characterized in** that in treating an aqueous solution with a copper content of 4 – 8 g/l, the viscosity of the extraction solution is raised by adjusting the content of the extractant in the extraction solution to the range of 25 – 50 vol.%.

10. A method according to claim 9, **characterized in** that the external pumping ratio of the extraction solution and the aqueous solution is adjusted to the range of 0.4 – 0.8 and the corresponding external pumping ratio between the stripped copper electrolyte and the aqueous solution of the extraction is adjusted to the range of 0.25 – 0.50.

11. A method according to claim 3, **characterized in** that in treating an aqueous solution with a copper content of over 8 g/l, the viscosity of the extraction solution is raised by adjusting the content of the extractant in the extraction solution to the range of 40 – 70 vol.%.

12. A method according to claim 11, **characterized in** that the external pumping ratio of the extraction solution and the aqueous solution is adjusted within the range of 1 – 4 and the corresponding ext rnal pumping ratio between the stripped copper electrolyte and the aqueous solution of

the extraction is adjusted within the range of 0.8 – 3.

13. A method according to claim 1, **characterized in** that the viscosity of the extraction solution is raised by using alifatic hydrocarbons, kerosenes, with a viscosity of 2.7 – 3.2 cP when measured at ambient temperature, as diluting agent for the extraction solution.

14. A method according to claim 1, **characterized in** that the viscosity of the extraction solution is raised by using aromatic hydrocarbons, kerosenes, with a viscosity of about 3 cP when measured at ambient temperature, as diluting agent for the extraction solution.

15. A method according to any of the above claim, **characterized in** that the viscosity of the extraction solution is raised by using a mixture of alifatic and aromatic hydrocarbons, with a viscosity of minimum 2.7 cP when measured at ambient temperature, as diluting agent for the extraction solution.

16. A method according to claim 1, **characterized in** that the sulphate content of the aqueous solution fed to solvent extraction is minimum 40g/l.

17. A method according to any of the above claim, **characterized in** that the extracting solutions flow through each stage of the extraction equipment at essentially the same time.

18. A method according to any of the above claim, **characterized in** that the extracting solutions flow through the washing and stripping stages of the equipment more slowly than the actual xtracting stages.